

BOOK REVIEW

GEOMETRICAL AND PHYSICAL OPTICS—R. S. Longhurst. Pp. i-xvi+534. Longmans, Green and Co., London. 1957. Price 60 shillings net.

This is a text book intended primarily for students reading for the honours degree in physics, but some of the topics have been dealt with so elaborately as to make them useful to postgraduate students. Examples of such topics are : Multiple beam interferometry, Huygens' principle and the scalar theory of diffraction, Fraunhofer diffraction patterns, Monochromatic aberrations, the Electromagnetic theory of light, Reflection and refraction of waves, Propagation of light in crystals and the Velocity of light, discussed in Chapters IX, X, XI, XV, XIX, XXI, XXII and XXIV respectively. In fact, it was formerly difficult for the students to prepare for the complete course with the help of a single text book chosen from those published previously without consulting other books on interferometry and electromagnetic theory of light, but in the book under review this deficiency has been removed to a large extent.

The special feature of this book is the abundant use of neat and beautiful diagrams. Further, the author seems to have spent a little thought over making each of these diagrams instructive and self-explanatory. The large number of interference and diffraction patterns reproduced in Plates I-III (p. 16) seem to have been taken from new photographs. The images in optical instruments reproduced in Plate IV are highly instructive and have bearing on advanced theories of formation of images in different instruments under different conditions.

The author has scrupulously avoided any discussion on atomic spectra probably on the ground that such topics would be out of place in a text book on geometrical and physical optics. So, students desirous of procuring some elementary knowledge in spectroscopy will have to consult some other suitable books, but as a text book on geometrical and physical optics this book will be immensely useful to students preparing for the B.Sc. (Hons.) and M.Sc. degrees of any Indian University. The get-up is excellent and the price is consistent with the volume and the quality of the printed matter.

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